

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

VICTAULIC COMPANY,

Plaintiff,

v.

Civil Action No. 20-887-GBW

ASC ENGINEERED SOLUTIONS, LLC,

Defendant.

MEMORANDUM ORDER

Plaintiff Victaulic Company (“Victaulic”) alleges that Defendant ASC Engineered Solutions, LLC’s (“ASC”) “pre-assembled SLT products with captured couplings” (the “Accused Products”) infringe United States Patent No. 7,712,796 (“the ’796 patent”). D.I. 1 ¶ 1; D.I. 152 ¶ 6. Pending now is Victaulic’s Motion #2 for Partial Summary Judgment that the Accused Products Literally Meet the Radius of Curvature Limitation (the “Motion,” D.I. 197). The Court has reviewed the parties’ briefing, D.I. 198; D.I. 217; D.I. 230, and statements of facts, D.I. 199; D.I. 218. For the reasons below, the Court denies Victaulic’s Motion.

I. BACKGROUND

A. Interpretation of Claim 1 of the ’796 Patent

Claim 1 of the ’796 patent claims the following:

1. In combination, interconnectable pipe coupling segments and a pair of pipe elements, each said coupling segment being positionable straddling facing end portions of said pair of pipe elements for securing said pipe elements together in end-to-end relationship, wherein said end portions of said pipe elements have an outer surface of substantially cylindrical profile, said pipe elements each having a circumferential groove in said outer surfaces of said end portions, and wherein each said segment comprises:

first and second arcuate surfaces adapted to contact the outer surfaces of said pipe elements within said circumferential grooves, said arcuate surfaces being in spaced apart relation to one another on opposite sides of

said segment, each of said arcuate surfaces subtending an angle of less than 180° and having a *radius of curvature greater than the radius of curvature of said outer surfaces of said pipe elements exclusive of said circumferential grooves* [the “radius of curvature” limitation]

D.I. 1-1, Ex. 1 at 11:33–61 (emphasis added); *see id.* at 13:28–31, 15:25–28, 16:25–28 (claims 21, 41, and 44). ASC sought to construe the italicized language as

“the radius of curvature of the outermost surfaces of said pipe elements at locations that are not within said circumferential grooves such that both pipe elements may be inserted between said segments when they are attached to one another by fasteners”

D.I. 101, Ex. A at 3 (emphasis added). Victaulic argued that no construction was necessary. *Id.*

The Court declined to construe the term. D.I. 124 at 1. At the *Markman* hearing, the Court explained that it would not either “change outer surfaces to outermost surfaces” or “add the limitation ‘such that both pipe elements may be inserted between said segment when they are attached to one another by fasteners[.]’” Tr. of Sept. 23, 2021 Hr’g at 34:14–25. The Court had earlier construed “outer” in the context of the following limitation in Claim 1: “wherein said end portions of said pipe elements have an outer surface of substantially cylindrical profile”

D.I. 1-1, Ex. 1 at 11:38–40. The Court explained that “outer” did not have to mean “outermost”:

[T]he parties agree that the claim term an outer surface refers to the surface either inside the [circumferential] groove or exclusive of the groove. ASC’s term outermost surface refers only to the surface exclusive of the groove[.] [T]hus[,] changing the claim term from outer surface to outermost surface as ASC proposes means that the claim term [that] currently refers to two surfaces will instead refer to one specific surface.

Tr. at 20:8–16. The Court referenced that prior reasoning when it again rejected an “outermost” limitation in the radius of curvature limitation. Tr. at 34:17–20.

B. The Accused Products

Victaulic's Final Infringement Contentions, D.I. 200-1, Ex. 2, App'x A ("Contentions"), provide diagrams of the Accused Products that label the portion of the Accused Products that Victaulic alleges infringe each limitation of Claim 1 of the '796 patent. Victaulic states that

As shown below [in Figure B], when an SLT Product (1) (which includes a coupling (2) and a first pipe element (3)) is combined with a grooved second pipe element (4) . . . , the combination forms an Accused Instrumentality.

[As in Figures C, D, and E,] [t]he[] Accused Instrumentality comprises interconnectable pipe coupling segments (2a, 2b) and a pair of pipe elements (the captured pipe element (3) [as shown in Figure A] and the second pipe element (4)). Each said coupling segment (2a, 2b) is positionable straddling facing end portions (3a, 4a) of said pair of pipe elements (3, 4) for securing said pipe elements (3, 4) together in end-to-end relationship, wherein said end portions (3a, 4a) of said pipe elements (3, 4) have an outer surface (3c, 4c) of substantially cylindrical profile (i.e., a substantially uniform radius of curvature), said pipe elements (3, 4) each having a circumferential groove (3b, 4b) in said outer surfaces (3c, 4c) of said end portions (3a, 4a). . . .

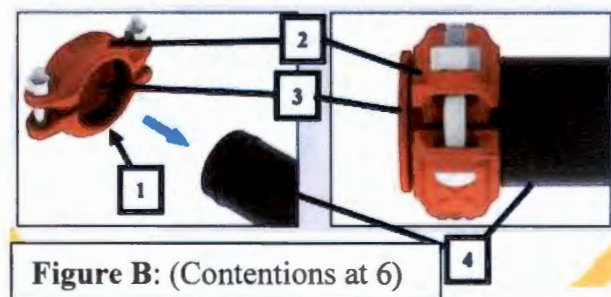
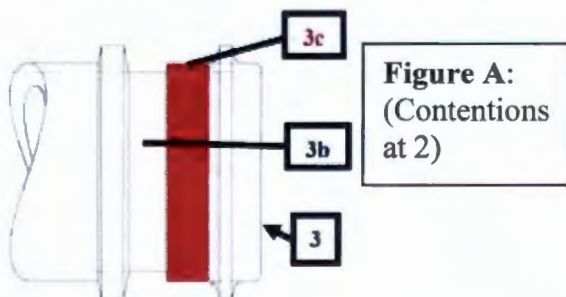
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As shown below [in Figures C, D, and E], each said segment (2a, 2b) comprises: first and second arcuate surfaces (2c, 2d) adapted to contact the outer surfaces of said pipe elements (3, 4) within said circumferential grooves (3b, 4b), said arcuate surfaces (2c, 2d) being in spaced apart relation to one another on opposite sides of said segment (2a, 2b).

...

As shown below [in Figure F], each of said arcuate surfaces (2c, 2d) has a **radius of curvature (R)** greater than the **radius of curvature (S)** of said outer surfaces (3c, 4c) of said pipe elements (3, 4) exclusive of said circumferential grooves (3b, 4b). As shown below, the arcuate surfaces (2c, 2d) have the same **radii of curvature (R)**, and the outer surfaces (3c, 4c) also have the same **radii of curvature (S)**.

Contentions at 1, 11, 17 (footnotes and some emphases omitted).



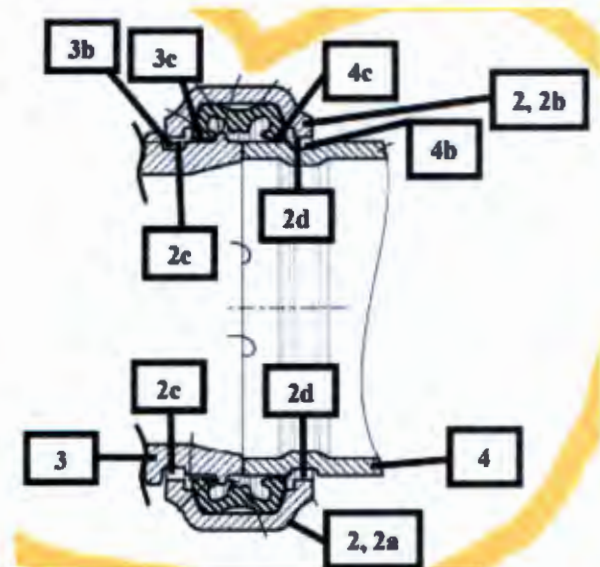


Figure C: (Contentions at 12)

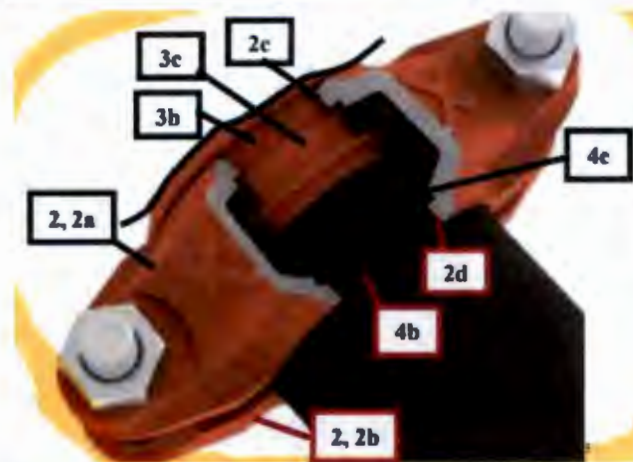


Figure E: (Contentions at 13)

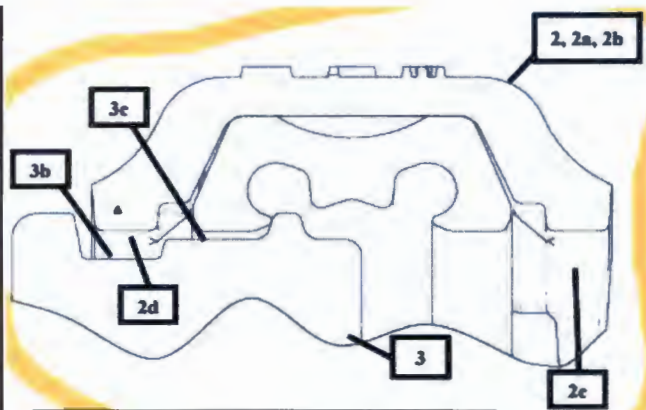


Figure D: (Contentions at 11)

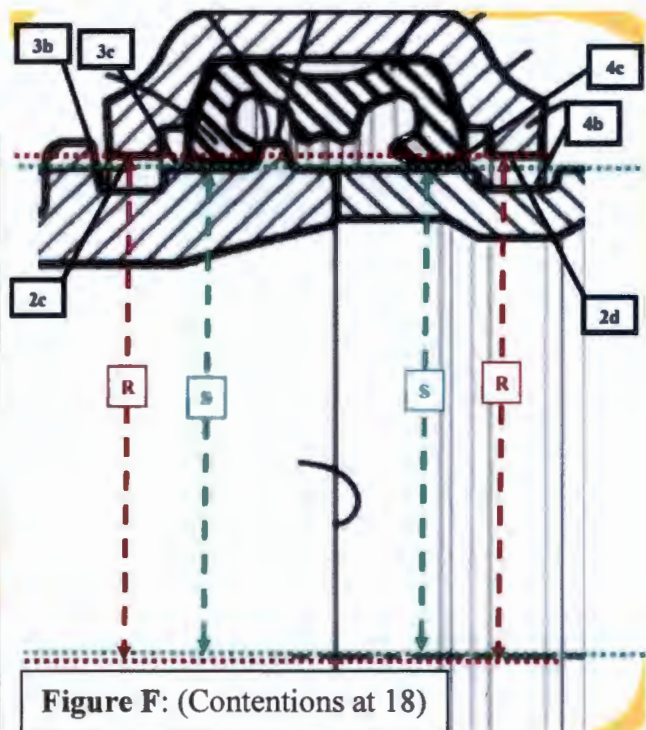


Figure F: (Contentions at 18)

The Court notes that ASC has not agreed to Victaulic's infringement contentions.

II. LEGAL STANDARD

"The court shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). "A genuine issue of material fact is one that could lead a reasonable jury to find in favor of the nonmoving party." *Bletz v. Corrie*, 974 F.3d 306, 308 (3d Cir. 2020). "The court must review the record as a whole, draw all reasonable inferences in favor of the nonmoving

party, and must not ‘weigh the evidence or make credibility determinations.’” *Id.* (citation omitted). The Court must enter summary judgment if the non-moving party “fails to make a showing sufficient to establish the existence of an element essential to [its] case, and on which [it] will bear the burden of proof at trial.” *Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986); *see SodexoMAGIC, LLC v. Drexel Univ.*, 24 F.4th 183, 204 (3d Cir. 2022) (quoting *Celotex*, 477 U.S. at 322). The Federal Circuit applies “the law of the regional circuit, here the Third Circuit.” *Acceleration Bay LLC v. 2K Sports, Inc.*, 15 F.4th 1069, 1075 (Fed. Cir. 2021).

III. DISCUSSION

Victaulic argues that “[e]ach Accused Product [] literally satisfies/infringes” the radius of curvature limitation “as a matter of law” because ASC improperly tries to reintroduce the rejected limitation that the “outer” surface be the “outermost” surface. D.I. 198 at 1–2. Victaulic asserts that “ASC’s accused coupling segments indisputably include arcuate surfaces with a radius of curvature larger than two such outer surfaces of the pipe elements” D.I. 198 at 3. ASC responds that, while Victaulic identifies only “*one* outer surface,” the “plain language” of the radius of curvature limitation requires a radius greater than the radius “of the ‘outer surfaces’ (plural) of the pipe elements exclusive of the grooves.” D.I. 217 at 1. ASC points to “a raised lip” in the “pre-installed pipe element” of the Accused Products and argues that “[t]he radius of curvature of the coupling’s arcuate surfaces is *not* greater than the radius of curvature of this outer surface.” D.I. 217 at 1 (emphasis in original). Lastly, ASC argues that the Court cannot grant summary “*judgment* as to a discrete issue” because the decision does not involve a “claim or defense” as Rule 56(a) requires. D.I. 217 at 18 (emphasis in original).

The parties dispute the proper construction of the claim term “outer surfaces” in the radius of curvature limitation in Claims 1, 21, 41, and 44 of the ’796 patent. However, the parties may not argue claim construction before the jury. *See Cordis Corp. v. Bos. Sci. Corp.*,

561 F.3d 1319, 1337 (Fed. Cir. 2009); *Board of Regents v. Boston Scientific Corp.*, 2022 WL 17039729, at *10 (D. Del. Nov. 17, 2022). Thus, the Court will first resolve the parties' claim construction dispute. The Court will then rule on the Motion.

A. Construction of "Outer Surfaces"

"[T]he claims of a patent define the invention to which the patentee is entitled the right to exclude." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (citation omitted); *Aventis Pharms. Inc. v. Amino Chemicals Ltd.*, 715 F.3d 1363, 1373 (Fed. Cir. 2013) (same). The proper construction of a patent is a question of law, although "subsidiary factfinding is sometimes necessary." *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 326–27 (2015) (citing *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996)). "The words of a claim are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art when read in the context of the specification and prosecution history."¹ *Thorner v. Sony Comput. Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (citing *Phillips*, 415 F.3d at 1313); *Unwired Planet, LLC v. Apple Inc.*, 829 F.3d 1353, 1358 (Fed. Cir. 2016) (similar). The Court "'first look[s] to, and primarily rel[ies] on, the intrinsic evidence,'" which includes the claims, written description, and prosecution history and "'is usually dispositive.'" *Personalized Media Commc'ns, LLC v. Apple Inc.*, 952 F.3d 1336, 1340 (Fed. Cir. 2020) (citation omitted). "[T]he specification ' . . . is the single best guide to the meaning of a disputed term.'" *Akzo Nobel Coatings, Inc. v. Dow Chem. Co.*, 811 F.3d 1334, 1339–40 (Fed. Cir. 2016) (citation omitted). However, "'[the Court] do[es] not read limitations from the embodiments in the [written description] into the claims.'" *MasterMine Software, Inc. v. Microsoft Corp.*, 874

¹ The specification includes both the written description and the claims, but practitioners commonly use "specification" to refer to the written description only. See *Board of Regents*, 2022 WL 17039729, at *3 n.1 (citation omitted). The Court will endeavor to use "written description" where intended herein.

F.3d 1307, 1310 (Fed. Cir. 2017) (citation omitted)). The written description “is not a substitute for, nor can it be used to rewrite, the chosen claim language.” *SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004). Extrinsic evidence may be useful, but it is “less significant than the intrinsic record” *Cont’l Cirs. LLC v. Intel Corp.*, 915 F.3d 788, 799 (Fed. Cir. 2019) (internal quotation marks and citations omitted).

The Court “starts with the claims” *Mobilemedia Ideas, LLC v. Apple Inc.*, 178 F. Supp. 3d 209, 216 (D. Del. 2016). The radius of curvature limitation appears in Claims 1, 21, 41, and 44 of the ’796 patent, and Claim 1 is representative:

1. In combination, interconnectable pipe coupling segments and a pair of pipe elements, . . . wherein said end portions of said pipe elements have ***an outer surface*** of substantially cylindrical profile, said pipe elements each having a circumferential groove ***in said outer surfaces*** of said end portions, and wherein each said segment comprises:

First and second arcuate surfaces adapted to contact the ***outer surfaces*** of said pipe elements within said circumferential grooves, . . . each of said arcuate surfaces subtending an angle of less than 180° and having a radius of curvature greater than the radius of curvature of ***said outer surfaces*** of said pipe elements exclusive of said circumferential grooves

D.I. 1-1, Ex. 1 at 11:33–51 (emphases added). As explained above, the “outer surface of substantially cylindrical profile” need not be the *outermost* surface of the “pipe elements.”

The most natural reading of the claims is that there are two (i.e., “a pair”) of pipe elements; each pipe element has an “end portion[]”; and each end portion has “an outer surface of substantially cylindrical profile.” When the ’796 patent then recites “said outer surfaces” (plural) in the first paragraph, the patent refers to the “outer surface of substantially cylindrical profile” on each of the two pipe elements (i.e., two outer surfaces). Thus, the “outer surface of substantially cylindrical profile” is the “outer surface” with “a circumferential groove.”

The next paragraph discusses “the outer surfaces of said pipe elements,” and the parties agree that the claimed invention has multiple outer surfaces. *See* D.I. 95 at 13, 24. One such surface is “within said circumferential grooves” and another is “exclusive of said circumferential grooves.” Thus, “the outer surfaces of the pipe elements” must refer, at least, to the “outer surface of substantially cylindrical profile”—an “outer surface” that must be “exclusive of said circumferential groove[]”—and the “outer surface” that is “within said circumferential groove[]” on each of the “pair of pipe elements” (i.e., no fewer than four outer surfaces).

The Court, thus, faces an ambiguity: Does “the radius of curvature of said outer surfaces . . . exclusive of said circumferential grooves” refer to (1) at least one “outer surface” on each pipe element (e.g., the “outer surface of substantially cylindrical profile”), or to (2) *all* of the outer surfaces on the pipe elements that are “exclusive of said circumferential grooves”?

Victaulic argues that the antecedent for “said outer surfaces” in the radius of curvature limitation is the “outer surfaces” discussed in the first paragraph of Claim 1. D.I. 230 at 2–3, 6–7. The second paragraph of Claim 1 discusses “the outer surfaces of said pipe elements.” D.I. 1-1, Ex. 1 at 11:40–45. Usually, both “*the* outer surfaces” and “*said* outer surfaces” would invoke an antecedent, *see Microprocessor Enhancement Corp. v. Texas Instruments Inc.*, 520 F.3d 1367, 1375 (Fed. Cir. 2008) (explaining that both “the” and “said” invoke antecedents, but the “mere use of a term with an antecedent does not require that both terms have the same meaning”), and the antecedent, here, would be the “outer surface[s] of substantially cylindrical profile,” D.I. 1-1 at 33–51. However, there must be a “circumferential groove in” the “outer surface of substantially cylindrical profile,” but at least two of “the outer surfaces of said pipe elements” must be “outer surfaces . . . within said circumferential grooves.” *Id.* An outer surface would not both have a circumferential groove in it and be in the circumferential groove. In the radius of

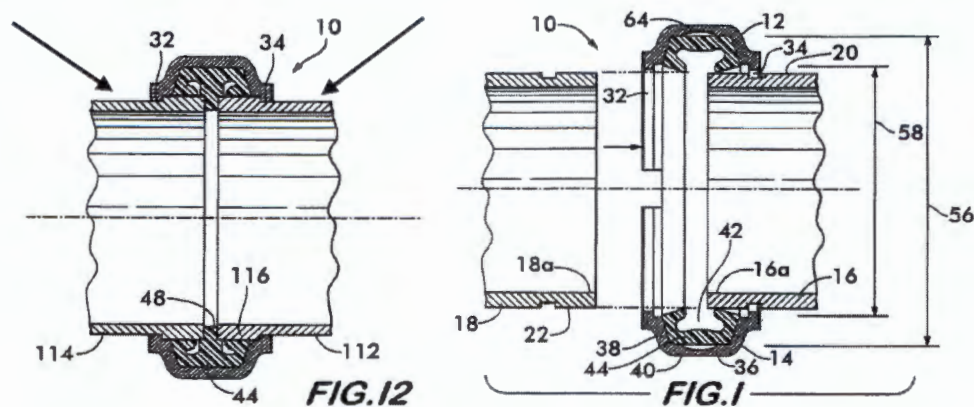
curvature limitation, “said outer surfaces” refers back most naturally to “the outer surfaces of said pipe elements” in the same paragraph. Thus, the Court rejects Victaulic’s argument that the antecedent of “said outer surfaces” in the radius of curvature limitation must be each of the “outer surface[s] of substantially cylindrical profile.”

Victaulic also argues that the written description refers to “‘respective outer surfaces 20 and 22 of substantially cylindrical profile,’ i.e., one per pipe element.” D.I. 230 at 4 (quoting D.I. 1-1, Ex. 1 at 4:45–46) (emphasis omitted). Victaulic is correct that, in figure 2, the outer surfaces that appear to meet the radius of curvature limitation are also the “outer surfaces . . . of substantially cylindrical profile.” D.I. 1-1, Ex. 1 at 4:45–46, 5:12–14. However, the figures are only embodiments of the invention, *see* D.I. 1-1, Ex. 1 at 34:5–40, and the Court will not read a limitation from an embodiment into the claims, *see MasterMine Software*, 874 F.3d at 1310.

ASC argues that the radius of curvature limitation must be true for each outer surface—other than those within the circumferential grooves—on the end portions of the pipe elements. D.I. 217 at 1. ASC agrees that the end portions have at least two “outer surfaces,” one within and one exclusive of the circumferential groove. D.I. 217 at 8. ASC first asserts that the “plain language” of the radius of curvature limitation requires that “the arcuate surfaces of the coupling segments ha[ve] a radius of curvature greater than the radius of curvature of the ‘outer surfaces’ (plural) of the pipe elements exclusive of the circumferential grooves.” D.I. 217 at 9. However, ASC offers no reason why one “outer surface” on each end portion could not constitute the “outer surfaces” required. ASC argues only that the “plain language of the claims” requires a radius greater than the radius of all outer surfaces. D.I. 217 at 12; *see also* D.I. 217 at 13–14 (discussing the requirement of multiple outer surfaces based on prior claim construction). The

Court disagrees and finds that one “outer surface” on the end portion of each pipe element would be sufficient to provide the “outer surfaces” that Claim 1 requires.

ASC points to figure 1 of the '796 patent to show that “each pipe element has a groove in at least two outer surfaces, e.g., an outer surface on each side of the groove.” D.I. 217 at 15. In figure 12, the end portion of each pipe element has a “raised circumferential shoulder[]” and the “arcuate surfaces” of the coupling segments “engage[]” those raised shoulders. D.I. 1-1, Ex. 1 at 7:37–41. As shown below, the “circumferential grooves” within which the coupling segments contact the pipe elements, as recited in Claim 1, D.I. 1-1, Ex. 1 at 11:33–51, appear to be the unlabeled outer surfaces of figure 12 that are *not* on the raised shoulders, *see* arrows:



D.I. 1-1, Ex. 1 at figs. 1, 12 (arrows added). Thus, figure 12 provides more support for the Court’s conclusion that there need not be multiple “outer surfaces . . . exclusive of the circumferential groove” on each end portion.

The Court rejects Victaulic’s proposed construction that “outer surfaces” refers back to each of the “outer surface[s] of substantially cylindrical profile.” The Court also rejects ASC’s proposed construction that “outer surfaces . . . exclusive of said circumferential grooves” refers to *all* outer surfaces on the end portions of the pipe elements not within the circumferential grooves. Instead, “outer surfaces” in the radius of curvature limitation refers to two or more outer surfaces on each end portion of each pipe element, where at least one such outer surface is

within the circumferential groove and at least one such outer surface is exclusive of the circumferential groove. The other occurrence of “outer surfaces” in the same paragraph of Claim 1, *see* D.I. 1-1, Ex. 1 at 11:43–44 (“the outer surfaces”), has the same meaning.

B. Summary Judgment

The Court denies Victaulic’s Motion because a fact that Victaulic asserts is material remains in dispute. The parties’ scheduling order explains that

Any motion for summary judgment shall be accompanied by a separate concise statement detailing each material fact as to which the moving party contends that there are no genuine issues to be tried that are essential for the Court’s determination of the summary judgment motion (not the entire case). . . . Any party who opposes the motion shall file and serve with its opposing papers a separate document containing a single concise statement that admits or disputes the facts set forth in the moving party’s concise statement When preparing the separate concise statement, a party shall reference only the material facts that are absolutely necessary for the Court to determine the limited issues presented in the motion for summary judgment (and no others)

D.I. 31 ¶¶ 22(d), (e). Victaulic asserted, and ASC disputed, the following fact:

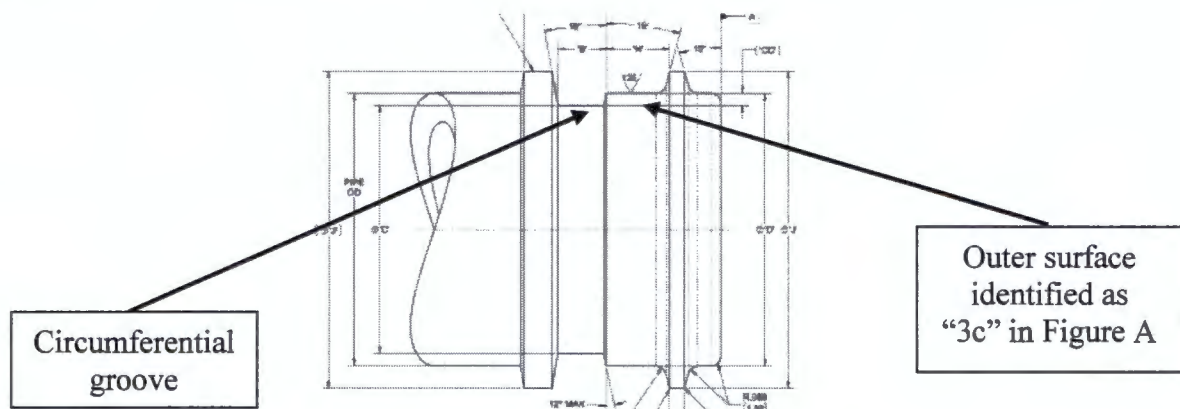
4. The Accused Products include coupling segments 2a, 2b1 and a pair of pipe elements 3, 4, where end portions of said pipe elements 3, 4 have an outer surface 3c, 4c of substantially cylindrical profile and there is a circumferential groove (3b, 4b) in said outer surfaces 3c, 4c.

ASC’s Response: Disputed. In the Accused Products, each pipe element has a circumferential groove, but the groove is not “in” the outer surface identified by Victaulic as “3c” or the outer surface identified by Victaulic as “4c.” The end portion of each pipe element has multiple outer surfaces. Each pipe element has a groove “in” the “outer surfaces” (plural) of the end portions.

D.I. 218 ¶ 4 (citations, diagrams, and some emphases omitted). The reader is directed to Figures A, C, and F, *supra* at Section I.B, to understand the various labels described.

ASC’s dispute may be immaterial to whether the Accused Products infringe the radius of curvature limitation. As long as one “outer surface” (exclusive of the circumferential groove) on each pipe element of the Accused Products has a radius of curvature that is less than the radius of curvature of the arcuate surfaces of the pipe coupling segments, the Accused Products would

meet the radius of curvature limitation. However, according to Victaulic, whether “there is a circumferential groove (3b, 4b) in said outer surfaces 3c, 4c[,]” D.I. 199 ¶ 4 (emphasis omitted), is one of “the material facts that are absolutely necessary” for the Court to determine the Motion, D.I. 31 ¶ 22(e). The Court will, thus, treat the fact as material. ASC cites only to diagrams of the Accused Products as support for its dispute. *See* D.I. 218 ¶ 4 (citing D.I. 219, Exs. D, G). When the Court “review[s] the record as a whole, [and] draw[s] all reasonable inferences in favor of the nonmoving party,” *Bletz*, 974 F.3d at 308 (citation omitted), the Court finds that a reasonable juror could examine the diagrams that ASC offers and determine that the circumferential groove is not “in” the “outer surface” identified as “3c” in Figure A, *supra* at Section I.B.:



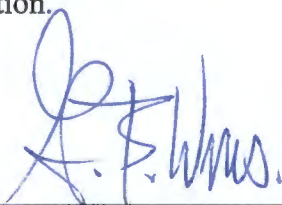
D.I. 219, Exs. D, G (same picture). Thus, the Court finds that the parties have a genuine dispute as to a fact that Victaulic asserts is material. For that reason, the Court denies the Motion.

WHEREFORE, at Wilmington this 6th day of December, 2022, **IT IS HEREBY ORDERED** that

1. The claim term “outer surfaces,” as used in the second paragraph of Claims 1, 21, 41, and 44 of United States Patent No. 7,712,796, refers to “two or more outer surfaces on each end portion of each pipe element, where at least one such outer surface is within the circumferential groove and at least one such outer surface is exclusive of the circumferential groove”;

2. Victaulic’s Motion #2 for Partial Summary Judgment that the Accused Products Literally Meet the Radius of Curvature Limitation (D.I. 197) is **DENIED**; and

3. Pursuant to the Standing Order for Summary Judgment Practice in Patent Cases² applicable to the parties’ summary judgment motions at the time such motions were filed, *see* D.I. 197 at 1 n.1; D.I. 201 at 1 n.1, Victaulic’s Motion #3 for Summary Judgment Against ASC’s Prior Art Invalidity Defenses Involving Claims 21, 41, and 44 of U.S. Patent No. 7,712,796 (D.I. 201) is **DENIED** without consideration of the merits of such motion.



GREGORY B. WILLIAMS
UNITED STATES DISTRICT JUDGE

² United States District Judge Colm F. Connolly, Standing Order for Summary Judgment Practice in Patent Cases (April 30, 2021), <https://www.ded.uscourts.gov/sites/ded/files/FINAL%20STANDING%20ORDER%20FOR%20SUMMARY%20JUDGMENT%20PRACTICE%20IN%20PATENT%20CASES.pdf>.